



September 11, 2019

Arcelor Mittal USA, Inc.
250 W US Highway 12
Burns Harbor, IN 46304-9745

Work Order No.: 19H1133

Re: NPDES Parameters

Dear Teri Kirk:

Microbac Laboratories, Inc. - Chicagoland Division received 3 sample(s) on 8/19/2019 10:45:00AM for the analyses presented in the following report as Work Order 19H1133.

The enclosed results were obtained from and are applicable to the sample(s) as received at the laboratory. All sample results are reported on an "as received" basis unless otherwise noted.

All data included in this report have been reviewed and meet the applicable project specific and certification specific requirements, unless otherwise noted. A qualifications page is included in this report and lists the programs under which Microbac maintains certification.

This report has been paginated in its entirety and shall not be reproduced except in full, without the written approval of Microbac Laboratories.

We appreciate the opportunity to service your analytical needs. If you have any questions, please contact your project manager. For any feedback, please contact Ron Misiunas, Division Manager, at ron.misiunas@microbac.com.

Sincerely,
Microbac Laboratories, Inc.

A handwritten signature in black ink that reads "Carey Gadzala". The signature is written in a cursive, flowing style.

Carey Gadzala
Project Manager

[Microbac Laboratories, Inc.](http://www.microbac.com)

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WORK ORDER SAMPLE SUMMARY**Date:** *Wednesday, September 11, 2019*

Client: Arcelor Mittal USA, Inc.
Project: NPDES Parameters
Lab Order: 19H1133

Lab Sample ID	Client Sample ID	Tag Number	Collection Date	Date Received
19H1133-01	011-Composite	011	08/18/2019 00:00	8/19/2019 10:45:00AM
19H1133-02	001-Composite	001	08/18/2019 00:00	8/19/2019 10:45:00AM
19H1133-03	002-Composite	002	08/18/2019 00:00	8/19/2019 10:45:00AM

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Field Results

Date: *Wednesday, September 11, 2019*

Client:	Arcelor Mittal USA, Inc.	Work Order:	19H1133
Client Project:	NPDES Parameters		
Client Sample ID:	001-Composite	Work Order/ID:	19H1133-02
Sample Description:	001	Sampled:	08/18/2019 00:00
Matrix:	Aqueous	Received:	08/19/2019 10:45
Analyses		Result	Units
FLD_CL_TITR		0.00	mg/L



CASE NARRATIVE

Date: *Wednesday, September 11, 2019*

Client: Arcelor Mittal USA, Inc.

Project: NPDES Parameters

Lab Order: 19H1133

Report has been revised at the clients request to include Cu and Ag for Outfall 001. 9/11/19

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Analytical Results

Date: Wednesday, September 11, 2019

Client:	Arcelor Mittal USA, Inc.	Work Order/ID:	19H1133-01
Client Project:	NPDES Parameters	Sampled:	08/18/2019 0:00
Client Sample ID:	011-Composite	Received:	08/19/2019 10:45
Sample Description:	011		
Matrix:	Aqueous		

Analyses	Certs	AT	Result	MDL	RL	Qual	Units	DF	Analyzed
			Method: SM 4500-CN C/E-1999						
						Analyst: ABG			
						Prep Date/Time: 08/19/2019 10:59			
Total Cyanide									
Cyanide, Total	ejj	A	0.0050	0.0020	0.0050		mg/L	1	08/19/2019 14:32
			Method: EPA 420.4 Rev 1.0						
						Analyst: ABG			
						Prep Date/Time: 08/19/2019 10:59			
Total Phenolics									
Phenolics, Total Recoverable	ejj	A	ND	0.0060	0.010	U	mg/L	1	08/20/2019 10:46

Analytical Results

Date: Wednesday, September 11, 2019

Client:	Arcelor Mittal USA, Inc.	Work Order/ID:	19H1133-02
Client Project:	NPDES Parameters	Sampled:	08/18/2019 0:00
Client Sample ID:	001-Composite	Received:	08/19/2019 10:45
Sample Description:	001		
Matrix:	Aqueous		

Analyses	Certs	AT	Result	MDL	RL	Qual	Units	DF	Analyzed
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Method: EPA 200.7 Rev 4.4

Analyst: RPL

Total Recoverable Metals by ICP

Prep Date/Time: 08/19/2019 11:20

Analyses	Certs	AT	Result	MDL	RL	Qual	Units	DF	Analyzed
Copper	ejj	A	0.0049	0.0013	0.010		mg/L	1	08/19/2019 14:15
Lead	ejj	A	ND	0.0033	0.0075	U	mg/L	1	08/19/2019 14:15
Zinc	ejj	A	0.020	0.0073	0.020		mg/L	1	08/19/2019 14:15

Method: EPA 200.8 Rev 5.4

Analyst: BTM

Total Recoverable Metals by ICP/MS

Prep Date/Time: 09/08/2019 12:49

Analyses	Certs	AT	Result	MDL	RL	Qual	Units	DF	Analyzed
Silver	ejj	A	ND	0.000053	0.00060	U	mg/L	1	09/09/2019 11:42

Method: EPA 1664B

Analyst: KMT

Oil & Grease (HEM) by SPE

Prep Date/Time: 08/19/2019 07:30

Analyses	Certs	AT	Result	MDL	RL	Qual	Units	DF	Analyzed
Oil & Grease (HEM)	ejj	A	ND	1.4	5.0	U	mg/L	1	08/19/2019 13:43

Method: SM 4500-CN C/E-1999

Analyst: ABG

Total Cyanide

Prep Date/Time: 08/19/2019 10:59

Analyses	Certs	AT	Result	MDL	RL	Qual	Units	DF	Analyzed
Cyanide, Total	ejj	A	0.0028	0.0020	0.0050		mg/L	1	08/19/2019 14:37

Method: EPA 420.4 Rev 1.0

Analyst: ABG

Total Phenolics

Prep Date/Time: 08/19/2019 10:59

Analyses	Certs	AT	Result	MDL	RL	Qual	Units	DF	Analyzed
Phenolics, Total Recoverable	ejj	A	ND	0.0060	0.010	U	mg/L	1	08/20/2019 10:48

Method: SM 2540 D-1997

Analyst: KMT

Total Suspended Solids

Prep Date/Time: 08/19/2019 11:27

Analyses	Certs	AT	Result	MDL	RL	Qual	Units	DF	Analyzed
Total Suspended Solids	ejj	A	5.2	1.0	1.0		mg/L	1	08/19/2019 12:42

Analytical Results

Date: Wednesday, September 11, 2019

Client:	Arcelor Mittal USA, Inc.	Work Order/ID:	19H1133-03
Client Project:	NPDES Parameters	Sampled:	08/18/2019 0:00
Client Sample ID:	002-Composite	Received:	08/19/2019 10:45
Sample Description:	002		
Matrix:	Aqueous		

Analyses	Certs	AT	Result	MDL	RL	Qual	Units	DF	Analyzed
				Method: EPA 1664B			Analyst: KMT		
Oil & Grease (HEM) by SPE									
Prep Date/Time: 08/19/2019 07:30									
Oil & Grease (HEM)	ejj	A	ND	1.4	5.0	U	mg/L	1	08/19/2019 13:43
				Method: SM 4500-CN C/E-1999			Analyst: ABG		
Total Cyanide									
Prep Date/Time: 08/19/2019 10:59									
Cyanide, Total	ejj	A	ND	0.0020	0.0050	U	mg/L	1	08/19/2019 14:39

ANALYTE TYPES: (AT)

A, B = Target Analyte

I = Internal Standard

M = Summation Analyte

S = Surrogate

T = Tentatively Identified Compound (TIC, concentration estimated)



QC SAMPLE IDENTIFICATIONS

BLK = Method Blank

DUP = Method Duplicate

BS = Method Blank Spike

MS = Matrix Spike

ICB = Initial Calibration Blank

CCB = Continuing Calibration Blank

CRL = Client Required Reporting Limit

PDS = Post Digestion Spike

QCS = Quality Control Standard

ICSA = Interference Check Standard "A"

ICSAB = Interference Check Standard "AB"

BSD = Method Blank Spike Duplicate

MSD = Matrix Spike Duplicate

ICV = Initial Calibration Verification

CCV = Continuing Calibration Verification

OPR = Ongoing Precision and Recovery Standard

SD = Serial Dilution

CERTIFICATIONS (Certs)

Below is a list of certifications maintained by the Microbac Merrillville Laboratory. All data included in this report has been reviewed for and meets all project specific and quality control requirements of the applicable accreditation, unless otherwise noted. Complete lists of individual analytes pursuant to each certification below are available upon request.

d Illinois EPA drinking water, wastewater and solid waste analysis (#200064)

i Kansas Dept Health & Env. NELAP (#E-10397)

j Kentucky Wastewater Laboratory Certification Program (#108202)

FLAGS, FOOTNOTES AND ABBREVIATIONS (as needed)**MDL:** Minimum Detection Limit**RL:** Reporting Limit**RPD:** Relative Percent Difference**U:** The analyte was analyzed for but was not detected above the reported quantitation limit. The quantitation limit has been adjusted for any dilution or concentration of the sample.

Cooler Receipt Log

Cooler ID: Default Cooler

Temp: 5.0°C
 MICROBAC®

Comments

No time

Cooler Inspection Checklist

Ice Present or not required?	Yes
Shipping containers sealed or not required?	Yes
Custody seals intact or not required?	Yes
Chain of Custody (COC) Present?	Yes
COC includes customer information?	Yes
Relinquished and received signature on COC?	Yes
Sample collector identified on COC?	Yes
Sample type identified on COC?	Yes
Correct type of Containers Received	Yes
Correct number of containers listed on COC?	No
Containers Intact?	Yes
COC includes requested analyses?	Yes
Enough sample volume for indicated tests received?	Yes
Sample labels match COC (Name, Date & Time?)	No
Samples arrived within hold time?	Yes
Correct preservatives on COC or not required?	Yes
Chemical preservations checked or not required?	Yes
Preservation checks meet method requirements?	Yes
VOA vials have zero headspace, or not recd.?	Yes

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